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THE JOURNAL
OF THE
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Foreword

IN May 1937 the Executive Council of The Acoustical Society of America approved the publication of a cumulative author and analytical subject index of the first ten volumes of the *Journal of the Acoustical Society*, this having been first suggested by Miss Madeline Mitchell, of the American Institute of Physics by analogy with the indexes which have been published by the Optical Society of America. Through flattery and other seductive means of persuasion, Editor F. R. Watson induced the present editor to undertake the preparation of the analytical subject index. Each paper was classified as to subject, and the material within the papers was provided with appropriate subtitles, and classified. The staff of the American Institute of Physics then assembled the material into the form presented here.

It is hoped that this index will be particularly useful to the workers in acoustics, not only because it covers the first ten years of the Journal but because the two sections at the end cover the entire literature of acoustics since about January, 1937, insofar as that literature has been received by the Physics Library at the University of Michigan.

F. A. FIRESTONE, *Editor*

September 27, 1939

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How to Use This Index

THE Index is composed of four main divisions: The Author Index to the *Journal of the Acoustical Society of America*, the Subject Index to the *Journal of the Acoustical Society of America*, the Author Index to Contemporary Literature, and the Subject Index to Contemporary Literature.

The Subject Index to the *Journal of the Acoustical Society* lists the titles of all the papers and abstracts under twelve section headings as follows: 1, Acoustical Society of America; 2, Architectural Acoustics; 3, Books and Bibliographies; 4, Ear and Hearing; 5, Instruments and Apparatus. Applied Acoustics; 6, Musical Instruments and Music; 7, Noise; 8, Standards; 9, Speech and Singing; 10, Supersonics; 11, Waves and Vibrations; 12, General, Unclassified. Each of these sections is further divided into a considerable number of decimally numbered subjects, which are listed on page vi under the heading, "Classification of Subjects." Each subject is divided into three parts entitled Papers, Subtitles, and Abstracts. Under Papers will be found the original titles of all the papers appearing in the journal on that subject. Under Abstracts are listed the titles of the papers presented at meetings. Since a great amount of valuable material appears in the journal in papers whose titles cannot fully describe all the subjects which the papers cover, many of the subtitles of papers have been indexed under the heading Subtitles. When subtitles covering the material did not appear in the paper, they were written; the captions of some of the figures were also included under this heading. Thus, while the Subtitles portion of the Index is informal, it is hoped that it will increase the probability of finding the desired information quickly.

References on most subjects can be located immediately by a logical use of the Classification of Subjects on page vi. In case the reference sought is of an unusual character such that there is uncertainty as to the subject under which it might have been classified, this can usually be found quite quickly by the process of eliminating the sections and subjects under which it is quite improbable that it might have been listed. In case of doubt, a title has often been listed under a number of subjects. As an example of the direct approach, suppose you wish to find the absorption coefficients of Rockwool. On looking over the section headings it is seen that this comes under the heading Architectural Acoustics, and Subject, Measured Sound Absorption Coefficients. Under Subtitles we find two references to Rockwool and on looking up these papers we find them entitled "The Measurement of Reverberation Time" and "The Determination of Absorption Coefficients for Frequencies up to 8000 Cycles," which titles of themselves would not have suggested the presence of data on Rockwool, thus demonstrating the value of having the index of Subtitles.

Obviously, the Author Index is more convenient than the Subject Index when one knows the name of the author of the paper in which he is interested.

The Subject Index to Contemporary Literature and the Author Index to Contemporary Literature are to be used as mentioned above, but they cover papers and books on acoustical subjects appearing elsewhere than in the *Journal of the Acoustical Society*. These indexes are merely a compilation of the References to Contemporary Papers on Acoustics which have appeared in the journal since April, 1937.

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Fairbanks, Grant (see Lewis, Don) **9**: 79(A)—1937
Farnham, R. E. Application of lamps for sound picture recording and reproducing. **3**: 311(T)—1932

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2.4 Sound Absorption, Theory and Methods of Measurement (continued)

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2. ARCHITECTURAL ACOUSTICS

2.4 Sound Absorption, Theory and Methods of Measurement (continued)
2.5 Measured Sound Absorption Coefficients
2.6 Noise Reduction by Increased Room Absorption
2.7 Reverberation, Theory and Calculation of

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2.5 Measured Sound Absorption Coefficients

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2. ARCHITECTURAL ACOUSTICS

2.7 Reverberation, Theory and Calculation of (continued)
2.8 Reverberation Measuring Instruments

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2.9 Sound Transmission, Theory and Methods of Measurement

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2.10 Measurements of Sound Transmission
2.11 Vibration Insulating Supports

2.10 Measurements of Sound Transmission

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4. Ear and Hearing

4.1 General, Unclassified

4.1 General, Unclassified

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4. EAR AND HEARING

4.1 General, Unclassified (continued)
4.2 Anatomy and Physiology of the Ear
4.3 Binaural Hearing, Localization
4.4 Deafness

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4. EAR AND HEARING

4.4 Deafness (continued)
4.5 Instruments Relating to Hearing
4.6 Loudness. Threshold Determinations

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4.6 Loudness. Threshold Determinations

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4. EAR AND HEARING

4.6 Loudness. Threshold Determinations (continued)

4.6 Loudness. Threshold Determinations (continued)

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4.6 Loudness. Threshold Determinations (continued)
4.7 Masking

4.6 Loudness. Threshold Determinations (continued)

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4. EAR AND HEARING

4.8 Phase Effects
4.9 Pitch
4.10 Subjective Tones

4.8 Phase Effects

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4. EAR AND HEARING

4.10 Subjective Tones (continued)
4.11 Theories of Hearing

4.10 Subjective Tones (continued)

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4. EAR AND HEARING

4.11 Theories of Hearing (continued)
4.12 Timbre

4.11 Theories of Hearing (continued)

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4.12 Timbre

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ABSTRACTS

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5. Applied Acoustics. Instruments and Apparatus

5.1 General, Unclassified
5.2 Amplifiers
5.3 Acoustical Impedance Measurement
5.4 Analyzers and Filters. Acoustic Filters. Oscillographs

5.1 General, Unclassified

PAPERS

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5.2 Amplifiers

PAPERS

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5.3 Acoustical Impedance Measurement (see also 11.4)

PAPERS

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SUBTITLE

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ABSTRACT

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5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (see also 5.15)

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (continued)

5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (continued)

Acoustic spectrometer. C. N. Hickman. **6**: 108—1934

Approximate networks of acoustic filters. Warren P. Mason. **1**: 263—1930

Discussion on the design of a rotating mirror oscilloscope. R. F. Mallina. **6**: 37—1934

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Finite acoustic filters. R. B. Lindsay. **8**: 211—1937

Finite solid acoustic filters. R. B. Lindsay and A. B. Focke. **10**: 41—1938

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New acoustic analyzer—determination of the sound spectra produced by aircraft in flight. L. P. Delsasso. **3**: 167—1931

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Theory of acoustic filtration in solid rods. R. B. Lindsay and F. E. White. **4**: 155—1932

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Analyzer attachment. W. O. Osbon and K. A. Oplinger. **5**: 41—1933

Apparatus for photographing sound waves from phonograph record. Joseph Tiffin. **5**: 227—1934

Application of Delsasso analyzer. L. P. Delsasso. **6**: 5—1934

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Band-pass filters for routine industrial testing. Blair Foulds. **10**: 129—1938

Crystal analyzer, sound meter. S. K. Wolf and W. J. Sette. **6**: 161—1935

Diagrammatic arrangement of Curtis oscillograph. E. C. Wente. **7**: 12—1935

Effect of the rate of frequency change of the driving force upon the shape of the response curve. Harry H. Hall. **7**: 109—1935

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High speed analyzers. E. C. Wente. **7**: 12—1935

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New analyzer for the audible frequency range. H. H. Hall and D. G. Clifford. **5**: 62—1933

New portable meter for noise measurement and analysis. W. O. Osbon and K. A. Oplinger. **4**: 176—1933

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (continued)
5.5 Audiometers
5.51 Broadcasting
5.6 Chronographs

5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (continued)

Photoelectric Fourier analysis of given curves. G. v. Békésy (E. N. T. **14**, 157–161 (1937)). **9**: 169—1937

Some applications of modern acoustic apparatus. S. K. Wolf and W. J. Sette. **6**: 57—1934

Sound analysis. H. H. Hall. **8**: 206—1937

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5.5 Audiometers (see 4.4)

PAPER

Tuning-fork audiometer and noise observations in Newport News, Virginia. E. Z. Stowell. **4**: 344—1933

SUBTITLES

Audiometer measurements showing noise reduction in rooms resulting from absorbent treatment. John S. Parkinson. **2**: 68—1930

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ABSTRACT

Standard requirements for audiometers. Wilbert F. Snyder. **10**: 85—1938

5.51 Broadcasting

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Acoustic pick-up for Philadelphia orchestra broadcasts. J. P. Maxfield. **4**: 122—1932

Acoustics of broadcasting and recording studios. G. T. Stanton and F. C. Schmid. **4**: 44—1932

Audible frequency ranges of music, speech and noise. W. B. Snow. **3**: 155—1931

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Effect of distance in the broadcasting studio. A. V. Rabinovich. **7**: 199—1936

Microphone technique in radio broadcasting. O. B. Hanson. **3**: 81—1931

NBC studio design. Robert M. Morris and George M. Nixon. **8**: 81—1936

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Frequency-reverberation time characteristic of broadcasting studios. R. M. Morris and G. M. Nixon. **8**: 87—1936

Parabolic reflector microphone. O. B. Hanson. **3**: 89—1931

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Microphone technique in broadcasting. O. B. Hanson. **3**: 9—1931

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5.6 Chronographs

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Chronographic method of measuring reverberation time. E. C. Wente and E. H. Bedell. **1**: 422—1930

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.6 Chronographs (continued)
5.7 Frequency Standards. Frequency Measuring and Recording Instruments
5.8 Loudspeakers. Horns

5.6 Chronographs (continued)

Spark chronograph developed for measuring intensity of percussion instrument tones. C. N. Hickman. **1**: 138—1929

ABSTRACT

Spark chronograph developed for measuring loudness of piano tones. C. N. Hickman. **1**: 35—1929

5.7 Frequency Standards. Frequency Measuring and Recording Instruments

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Apparatus for direct-recording the pitch and intensity of sound. Jûichi Obata and Ryûji Kobayashi. **10**: 147—1938

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SUBTITLES

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5.8 Loudspeakers. Horns (see also 5.13 and 5.17)

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Acoustical output of air sound senders. Olaf Devik and Helmer Dahl. **10**: 50—1938

Comments on the theory of horns. William M. Hall. **3**: 552—1932

Compound horn loudspeaker. Harry F. Olson and Frank Massa. **8**: 48—1936

Concatenated cone speaker. A. V. Bedford. **2**: 251—1930

Directional radiation of sound. Irving Wolff and Louis Malter. **2**: 201—1930

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Loudspeakers for high-fidelity large scale reproduction of sound. Frank Massa. **8**: 126—1936

Means for radiating large amounts of low frequency sound. Edward W. Kellogg. **3**: 94—1931

Method of eliminating cavity resonance, extending low frequency response and increasing acoustic damping in cabinet type loudspeakers. Benjamin Olney. **8**: 104—1936

M.K.S. system of units applied to electroacoustics. A. E. Kennelly and Jackson H. Cook. **9**: 336—1938

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.8 Loudspeakers. Horns (continued)

5.8 Loudspeakers. Horns (continued)

Motional impedance diagrams. T. S. Littler. **5**: 235—1934

Multiple coil, multiple cone loudspeakers. Harry F. Olson. **10**: 305—1939

New high efficiency theatre loudspeaker of the directional baffle type. Harry F. Olson. **2**: 485—1931

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Sound waves of finite amplitude in an exponential horn. S. Goldstein and N. W. McLachlan. **6**: 275—1935

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Subharmonics in forced oscillations in dissipative systems. Part I. P. O. Pedersen. **6**: 227—1935

Supersonic measurement of the directional characteristics of horns. Stanford Goldman. **5**: 181—1934

Theory of the electrostatic loud speaker. C. R. Hanna. **2**: 143—1930

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Exponential horn theory. A. L. Thuras, R. T. Jenkins and H. T. O'Neil. **6**: 178—1935

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.8 Loudspeakers. Horns (continued)
5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment

5.8 Loudspeakers. Horns (continued)

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Automatic logarithmic recorder for frequency response measurements. S. Ballantine. **4**: 10—1932

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Compound horn loudspeaker. H. F. Olson and F. Massa. **7**: 237—1936

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Loud speaker sound pressure measurements. E. W. Kellogg. **2**: 7—1930

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Loudspeakers for high-fidelity large scale reproduction of sound. F. Massa. **8**: 67—1936

Means for radiating large amounts of low frequency sound. E. W. Kellogg. **3**: 10—1931

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Multiple coil, multiple cone loudspeaker. Harry F. Olson. **10**: 256—1939

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Theory of the horn type loud speaker. C. R. Hanna. **2**: 7(T)—1930

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5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment

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Absolute sound intensity in liquids by spherical torsion pendula. Elias Klein. **9**: 312—1938

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Effect of physical size on the directional response characteristics of unidirectional and pressure gradient microphones. Frank Massa. **10**: 173—1939

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment (continued)

5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment (continued)

Efficient miniature condenser microphone system. H. C. Harrison and P. B. Flanders. **4**: 451(S)—1932

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Mass controlled electrodynamic microphones: the ribbon microphone. Harry F. Olson. **3**: 56—1931

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Moving coil pistonphone for measurement of sound field pressure. Ralph P. Glover and Benjamin Baumzweiger. **10**: 200—1939

Moving-coil telephone receivers and microphones. E. C. Wente and A. L. Thuras. **3**: 44—1931

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Technique of microphone calibration. Stuart Ballantine. **3**: 319—1932

Tubular directional microphone. W. P. Mason and R. N. Marshall. **10**: 206—1939

Uni-directional ribbon microphone. Julius Weinberger, Harry F. Olson and Frank Massa. **5**: 139—1933

Use of pressure gradient microphones for acoustical measurements. Irving Wolff and Frank Massa. **4**: 217—1933

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Directivity index. W. P. Mason and R. N. Marshall. **10**: 212—1939

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Latour capillary microphone. E. C. Wente. **7**: 8—1935

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Microphone calibration with level recorder. Stuart Ballantine. **5**: 22—1933

Microphone calibration with the thermophone. Stuart Ballantine. **3**: 327—1932

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Miniature pressure gradient microphone. F. J. Willig. **10**: 295—1939

Parabolic reflector microphone. O. B. Hanson. **3**: 89—1931

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Small condenser microphone. William M. Hall. **3**: 560—1932

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment (continued)
5.10 Navigational Instruments. Depth and Altitude Finding Instruments. Geophysical Prospecting. Under-Water Sound. Submarine Detectors

5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment (continued)

Supersonic microphone. Stanford Goldman. **5**: 185—1934

Thermometric microphones. E. C. Wente. **7**: 9—1935

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New acceleration meter (with demonstration). Harvey C. Hayes and W. F. Curtis. **10**: 84—1938

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Some data on a room designed for free field measurements. E. H. Bedell. **8**: 69—1936

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Uni-directional ribbon microphone. H. F. Olson. **3**: 315—1932

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5.10 Navigational Instruments. Depth and Altitude Finding Instruments. Geophysical Prospecting. Under-Water Sound. Submarine Detectors

PAPERS

Influence of atmospheric conditions upon the audibility of fog signals. B. R. Hubbard. **3**: 111—1931

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.10 Navigational Instruments. Depth and Altitude Finding Instruments. Geophysical Prospecting. Under-Water Sound. Submarine Detectors (continued)

5.11 Oscillators

5.12 Phase Meters

5.13 Public Address Systems and Sound Picture Installations

5.10 Navigational Instruments. Depth and Altitude Finding Instruments. Geophysical Prospecting. Under-Water Sound. Submarine Detectors (continued)

Transmission of sound through sea water. Herbert Grove Dorsey. **3**: 428—1932; Part II, **7**: 287—1936

Use of sound in navigation. Horatio W. Lamson. **1**: 403—1930

SUBTITLES

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5.11 Oscillators

PAPERS

Vacuum tube oscillator for membranes and plates. R. C. Colwell. **7**: 228—1936

SUBTITLES

Audiofrequency oscillator. H. A. Chinn and Vir N. James. **10**: 240—1939

Beat oscillator. Stuart Ballantine. **5**: 13—1933

Optical tone generator of complex wave forms. Harvey Fletcher and W. A. Munson. **5**: 107—1933

Oscillator. W. O. Osbon and K. A. Oplinger. **5**: 43—1933

5.12 Phase Meters

PAPER

Direct reading audio-frequency phase meter. W. R. MacLean and L. J. Sivian. **2**: 419—1931

5.13 Public Address Systems and Sound Picture Installations

PAPERS

Acoustic power levels in sound picture reproduction. S. K. Wolf and W. J. Sette. **2**: 384—1931

Amplification of small bells. A. N. Curtiss and G. M. Giannini. **5**: 213—1934

Characteristics of sound transmission in rooms. E. C. Wente. **7**: 123—1935

Measurement of reverberation time and its application to acoustic problems in sound pictures. F. L. Hopper. **2**: 499—1931

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.13 Public Address Systems and Sound Picture Installations (continued)
5.14 Rayleigh Disks
5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement

5.13 Public Address Systems and Sound Picture Installations (continued)

Sound pictures: fundamental principles and some factors which affect their quality. Franklin L. Hunt. **2**: 476—1931

SUBTITLES

Acoustic power required as function of auditorium volume. S. K. Wolf and W. J. Sette. **2**: 396—1931

Acoustic power required as function of seating area. S. K. Wolf and W. J. Sette. **2**: 394—1931

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Quality of orchestral music as function of cut-off frequency. W. B. Snow. **3**: 164—1931

ABSTRACTS

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5.14 Rayleigh Disks

PAPER

Absolute sound intensity in liquids by spherical torsion pendula. Elias Klein. **9**: 312—1938

SUBTITLES

Microphone calibration by Rayleigh disk. Stuart Ballantine. **3**: 341—1932

Microphone calibration with Rayleigh disk. G. W. C. Kaye. **7**: 174—1936

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Rayleigh disk in liquids. Elias Klein. **10**: 108—1938

Rayleigh disk instrument for great sound intensities. Olaf Devik and Helmer Dahl. **10**: 53—1938

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (see also 5.4)

PAPERS

Absolute amplitudes and spectra of certain musical instruments and orchestras. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 330—1931

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (continued)

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (continued)

American tentative standards for noise measurement. Subcommittee on Noise Measurement. **8**: 143—1936

American tentative standards for sound level meters. Subcommittee on Noise Measurement. **8**: 147—1936

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Calibration of condenser microphones for soundmeters. E. J. Abbott. **4**: 235—1933

Direct reading audio-frequency phase meter. W. R. MacLean and L. J. Sivian. **2**: 419—1931

High speed level recorder for acoustic measurements. E. C. Wente, E. H. Bedell and K. D. Swartzel, Jr. **6**: 121—1935

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Loud speaker sound pressure measurements. Edward W. Kellogg. **2**: 157—1930

Loudness scale for industrial noise measurements. B. G. Churcher. **6**: 216—1935

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On interference elimination with the warble tone. W. L. Barrow. **3**: 562—1932

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Reverberation-time scale for high speed level recorders. Keron C. Morrical. **10**: 300—1939

Role of acoustical measurements in machinery quieting. Ernest J. Abbott. **8**: 133—1936

Scales for sound measurements used in machinery noise reduction. E. J. Abbott. **6**: 137—1935

Some applications of modern acoustic apparatus. S. K. Wolf and W. J. Sette. **6**: 160—1935

Tuning-fork audiometer and noise observations in Newport News, Virginia. E. Z. Stowell. **4**: 344—1933

SUBTITLES

Absolute measurement of sound at great intensities. Olaf Devik and Helmer Dahl. **10**: 50—1938

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Audio noise meter and analyzer. H. B. Marvin. **3**: 389—1932

Auditory diagram. Subcommittee on Noise Measurement. **8**: 144—1936

Automatic level recorder. G. T. Stanton and J. E. Tweeddale. **3**: 377—1932

Crystal analyzer, sound meter. S. K. Wolf and W. J. Sette. **6**: 161—1935

Determination of intensity from static pressure measurements. E. C. Wente. **7**: 3—1935

Dynamic characteristic of indicating instrument. Subcommittee on Noise Measurement **8**: 148—1936

Frequency response of sound level meters. Subcommittee on Noise Measurement. **8**: 148—1936

General discussion of noise measurements. W. O. Osbon and K. A. Oplinger. **5**: 44—1933

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Modern acoustimeter. E. E. Free. **2**: 25—1930

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (continued)
5.16 Sound Recording and Reproducing

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (continued)

ABSTRACTS

Automatic logarithmic recorder for frequency response measurements. S. Ballantine. **4**: 10—1932

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Loud speaker sound pressure measurements. E. W. Kellogg. **2**: 7—1930

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On the loudness of noise. H. B. Marvin. **3**: 317—1932

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Pressures of sound waves measured by a condenser microphone and oscilloscope for continuously varying frequency. Robert Rogers and F. J. Willig. **9**: 271—1938

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Some applications of modern acoustic apparatus. S. K. Wolf and W. J. Sette. **6**: 57—1934

Summary of previous and existing methods of noise measurement. E. E. Free. **2**: 3—1930

5.16 Sound Recording and Reproducing (see also 5.13)

PAPERS

Acoustics of broadcasting and recording studios. G. T. Stanton and F. C. Schmid. **4**: 44—1932

Audible frequency ranges of music, speech and noise. W. B. Snow. **3**: 155—1931

Combined reverberation time of electrically coupled rooms. A. P. Hill. **4**: 63—1932

Direct recording and reproducing materials for disk recording. A. C. Keller. **8**: 234—1937

Magnetic strip recording with tapes and circular recording and reproducing heads. H. Lubeck. (Akustische Zeits. **2**, 273–295 (1937)) **9**: 358—1938

Measurement of speed fluctuations in sound recording and reproducing equipment. Edward W. Kellogg and Adolph R. Morgan. **7**: 271—1936

On an inertialess procedure of taking phonophotographic records. M. Grutzmacher, W. Lottermoser. (Akustische Zeits. **2**, 242–248 (1937)) **9**: 265—1938

On distortion in sound reproduction from phonograph records. J. A. Pierce and F. V. Hunt. **10**: 14—1938

Planetary reduction gear system for recording turntables. A. V. Bedford. **3**: 207—1931

Some physical factors affecting the illusion in sound motion pictures. Joseph P. Maxfield. **3**: 69—1931

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SUBTITLES

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Microphone placement in sound stages. Joseph P. Maxfield. **3**: 76—1931

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.16 Sound Recording and Reproducing (continued)
5.17 Telephone Receivers

5.16 Sound Recording and Reproducing (continued)

ABSTRACTS

Acoustic control by liveness constant. W. J. Albersheim and J. P. Maxfield. **5**: 220—1934

Acoustics of broadcasting and recording studios. G. T. Stanton and F. C. Schmid. **4**: 8—1932

Application of lamps for sound picture recording and reproducing. R. E. Farnham. **3**: 311(T)—1932

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Direct recording and reproducing materials for disk recording. A. C. Keller. **8**: 206—1937

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Measurement of speed fluctuations in sound recording and reproducing equipment. E. W. Kellogg and A. R. Morgan. **7**: 236—1936

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Planetary reduction gear system for turntables. A. V. Bedford. **3**: 6—1931

Preliminary report on a high fidelity reproducer for lateral cut disk records. F. V. Hunt and J. A. Pierce. **9**: 274—1938

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Some physical factors affecting the illusion in talking motion pictures. J. P. Maxfield. **3**: 10—1931

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5.17 Telephone Receivers

PAPERS

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Motional impedance diagrams. T. S. Littler. **5**: 235—1934

Moving-coil telephone receivers and microphones. E. C. Wente and A. L. Thuras. **3**: 44—1931

Performance of telephone receivers as affected by the ear. Harry F. Olson and Frank Massa. **6**: 250—1935

SUBTITLES

Artificial ear tests. H. F. Olson and F. Massa. **6**: 252—1935

Bone conduction receiver. C. E. Dean. **2**: 282—1930

Effect of telephone receiver in producing hearing in opposite ear. C. E. Dean. **2**: 289—1930

Telephone receiver measurements. Stuart Ballantine. **5**: 19—1933

ABSTRACT

Acoustics of the telephone receiver with a new earcap. Poul Jarnak. **9**: 77—1937

5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.18 Thermophones
5.19 Tuning forks

5.18 Thermophones. (see 5.9)

PAPERS

Calibration of condenser microphones for soundmeters. E. J. Abbott. **4**: 235—1933

SUBTITLES

Comparison of thermophone calibrations with air and hydrogen. Stuart Ballantine. **3**: 334—1932

Theory of the thermophone. Stuart Ballantine. **3**: 328—1932

Values of some of the physical constants in the thermophone formula. Stuart Ballantine. **3**: 335—1932

5.19 Tuning Forks

PAPER

Adjustable tuning fork frequency standard. O. Hugo Schuck. **10**: 119—1938

SUBTITLE

Effective length of bending portion of fork prong. O. Hugo Schuck. **10**: 126—1938

ABSTRACT

Adjustable tuning fork. O. Hugo Schuck. **10**: 86—1938

6. *Musical Instruments and Music*

6.1 General, Unclassified

6.1 General, Unclassified

PAPERS

Absolute amplitudes and spectra of certain musical instruments and orchestras. L. J. Sivian, H. K. Dunn, and S. D. White. **2**: 330—1931

Acoustics of music rooms. Vern O. Knudsen. **2**: 434—1931

Audible frequency ranges of music, speech and noise. W. B. Snow. **3**: 155—1931

Certain anomalies in the theory of air column behavior in orchestral wind instruments. John Redfield. **6**: 34—1934

Chromatic stroboscope. O. L. Railsback. **9**: 37—1937

Design considerations for a simple and versatile electronic music instrument. Benjamin F. Miessner. **6**: 181—1935

Frequency ratios of the tempered scale. Charles Williamson. **10**: 135—1938

New horizons in music. Leopold Stokowski. **4**: 11—1932

New just scale. John Redfield. **1**: 249—1930

Principles underlying the tuning of keyboard instruments to equal temperament. G. F. Herrenden Harker. **8**: 243—1937

Simple and precise standard of musical pitch. Horatio W. Lamson. **7**: 51—1935

Some physical characteristics of speech and music. Harvey Fletcher. **3**: 1(S)—1931

Theory of the chromatic stroboscope. Robert W. Young and Allen Loomis. **10**: 112—1938

SUBTITLES

Acoustical properties of some European music rooms. Vern O. Knudsen. **2**: 450—1931

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Frequency ratios in equally tempered scale. H. A. Frederick. **9**: 70—1937

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Music, definitions. H. A. Frederick. **9**: 70—1937

Notation for overtone structure. H. Fletcher. **6**: 60—1934

Peak power of musical instruments. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 369—1931

Peak powers of 15, 18, and 75 piece orchestras. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 363—1931

Quality of orchestral music as function of cut-off frequency. W. B. Snow. **3**: 164—1931

Spectra of 15, 18, and 75 piece orchestras. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 346—1931

ABSTRACTS

Absolute amplitudes and spectra of certain musical instruments. L. J. Sivian, H. K. Dunn, and S. D. White. **1**: 172—1930

Audible frequency ranges of music, speech and noise. W. B. Snow. **3**: 10—1931

Certain anomalies in the theory of air column behavior in orchestral wind instruments. J. Redfield. **6**: 55—1934

Control of pitch in wind instruments. J. B. Taylor. **3**: 317—1932

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Improved chromatic stroboscope. R. W. Young and A. Loomis. **9**: 79—1937

Incommensurability of the octave interval with any other interval. W. T. Bartholomew. **2**: 6—1930

Loudness of unison produced by a number of voices each of unit loudness. J. Redfield. **6**: 194—1935

Measurement of timbre. D. Lewis and M. J. Larsen. **8**: 207—1937

Music and sound. Ll. S. Lloyd, with a foreword by Sir William Bragg (book review). **10**: 151—1938

Music as a humanizing agent. Henry C. Lomb. **1**: 172—1930

6. MUSICAL INSTRUMENTS AND MUSIC

6.1 General, Unclassified (continued)
6.2 Bells
6.3 Brass

6.1 General, Unclassified (continued)

Musical instruments and acoustical science. W. B. White. **8**: 62(L)—1936

Musical scale and its tuning. W. B. White. **3**: 3—1931

New horizons in music. L. Stokowski. **4**: 7(T)—1932

Objective analysis of musical performance. Carl E. Seashore (book review). **9**: 165—1937

Present-day preferences for certain melodic intervals in the natural, equal-tempered and Pythagorean scales. A. Small. **10**: 256—1939

Psychology in music. C. E. Seashore. **5**: 221(T)—1934

Psychology of music. Carl E. Seashore (book review). **10**: 249—1939

Reed organ to demonstrate the just scale. A. T. Jones. **4**: 3—1932

Science and music. Sir James Jeans (book review). **10**: 74—1938

Timbre of orchestral instruments. C. E. Seashore and D. Rothschild. **6**: 55—1934

6.2 Bells

PAPERS

Amplification of small bells. A. N. Curtiss and G. M. Giannini. **5**: 213—1934

Component tones from a bell. Arthur Taber Jones and George W. Alderman. **4**: 331—1933

Effect of temperature on the pitch of a bell. Arthur Taber Jones. **1**: 382—1930

Further studies of the strike note of bells. Arthur Taber Jones and George W. Alderman. **3**: 297—1931

Some improvements on the operation of the bells of a carillon. G. M. Giannini. **4**: 245—1933

Some notes on the character of bell tones. A. N. Curtiss and G. M. Giannini. **5**: 159—1933

Sound of bells. Jottings from my experiences in the domain of the sound of bells. Jan Arts. **9**: 344—1938

Sounds of bells. The secondary strike note. Jan Arts. **10**: 327—1939

Strike note of bells. Arthur Taber Jones. **1**: 373—1930; **8**: 199—1937

Suggested acoustical improvements in the architectural design of bell towers. G. M. Giannini. **7**: 135—1935

SUBTITLE

Duration of contact of clapper. Arthur Taber Jones and George Alderman. **3**: 304—1931

ABSTRACTS

Acoustic properties of small gongs. J. C. Steinberg and D. W. Farnsworth. **4**: 5—1932

Further studies on the strike note of bells. A. T. Jones and George W. Alderman. **3**: 5—1931

Some improvements in the design of bell towers. G. M. Giannini. **6**: 55(T)—1934

Some improvements on the bells of a carillon. G. M. Giannini. **4**: 5—1932

Some notes on the character of bell tones. A. N. Curtiss and G. M. Giannini. **5**: 63—1933

"Strike notes" from bells. A. T. Jones. **1**: 169—1930

6.3 Brass

PAPER

Minimizing discrepancies of intonation in valve instruments. John Redfield. **3**: 292—1931

SUBTITLES

Audible frequency range of musical sounds. W. B. Snow. **3**: 161—1931

Peak powers of tuba, trombone, trumpet and French horn. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 356—1931

Trombone, trumpet, and French horn spectra. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 344—1931

Tuba spectrum. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 343—1931

ABSTRACTS

Control of pitch in wind instruments. J. B. Taylor. **3**: 317—1932

Minimizing discrepancies of intonation in valve instruments. J. Redfield. **3**: 5—1931

6. MUSICAL INSTRUMENTS AND MUSIC

6.4 Drums and Traps
6.5 Organs
6.6 Pianos

6.4 Drums and Traps

PAPER

Experimental studies on the sound and vibration of drum. Jûichi Obata and Takehiko Tesima. 6: 267—1935

SUBTITLES

Audible frequency range of musical sounds. W. B. Snow. **3**: 161—1931

Bass drum acoustical spectrum. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 340—1931

Peak powers of drums and traps. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 352—1931

Snare drum, cymbals, and triangle spectra. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 342—1931

6.5 Organs (see also 6.9)

PAPERS

Acoustic spectra of organ pipes. C. P. Boner. 10: 32—1938

Organ pipes. Leslie N. Leet. **3**: 242—1931

Organ pipes and vowel quality. Arthur Taber Jones. **6**: 282—1935

Principles underlying the tuning of keyboard instruments to equal temperament. G. F. Herrenden Harker. **8**: 243—1937

Resonance in certain non-uniform tubes. Arthur Taber Jones. **10**: 167—1939

Theory of the Haskell organ pipe. Arthur Taber Jones. **8**: 196—1937

Transitions of sound in the organ. F. Trendelenburg, E. Thienhaus, E. Franz (Akustische Zeits. 3, 7-20 (1938)). **10**: 76—1938

SUBTITLES

Organ pipes with contained rods. Arthur Taber Jones. **10**: 169—1939

Organ spectra. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 347—1931

Peak power of the pipe organ. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 367—1931

ABSTRACTS

Characteristic sound producers of the organ. L. N. Leet. **3**: 4—1931

Onset of sound on an organ. F. Trendelenburg and E. Thienhaus (Akustische Zeits. **2**, 59 (1936)). **8**: 264—1937

Open pipes, stopped pipes and double stopped pipes. J. B. Taylor. **3**: 5—1931

Reed organ to demonstrate the just scale. A. T. Jones. **4**: 3—1932

Theory of the Haskell organ pipe. A. T. Jones. **8**: 210—1937

6.6 Pianos

PAPERS

Departure of the overtones of a vibrating wire from a true harmonic series. R. S. Shankland and J. W. Coltman. **10**: 161—1939

Elastic impact of a pianoforte hammer. R. N. Ghosh. **7**: 254—1936

Human element in piano tone production. William Braid White. **1**: 357—1930

New method for tuning pianos. Jean de Bremaeker (Musique et Instruments, **28**, 179 (1937)). **10**: 155—1938

New system of tuning pianos. William Braid White. **10**: 246—1939

On the tone quality of pianoforte. R. N. Ghosh. **7**: 27—1935

Practical tests for determining the accuracy of pianoforte tuning. William Braid White. **9**: 47—1937

Precision study of piano touch and tone. Harry C. Hart, Melville W. Fuller and Walter S. Lusby. **6**: 80—1934

Principles underlying the tuning of keyboard instruments to equal temperament. G. F. Herrenden Harker. **8**: 243—1937

Spark chronograph developed for measuring intensity of percussion instrument tones. C. N. Hickman. **1**: 138—1929

6. MUSICAL INSTRUMENTS AND MUSIC

6.6 Pianos (continued)
6.7 Violin Family

6.6 Pianos (continued)

SUBTITLES

Harmonic structure and loudness of piano tones related. William B. White. **1**: 362—1930

Investigations on piano tones. S. K. Wolf and W. J. Sette. **6**: 164—1935

Miessner electric piano. B. F. Miessner. **6**: 187—1935

Peak power of piano. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 361—1931

Peak sound pressures. L. J. Sivian. **1**: 16(S)—1930

Piano spectrum. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 345—1931

Piano camera. C. E. Seashore. **2**: 76—1930

Piano frequency analyses. L. J. Sivian. **1**: 9(S)—1930

ABSTRACTS

Human factor in piano tone production. W. B. White. **1**: 37—1929

Physical aspects of piano tone. O. Ortmann. **3**: 3—1931

Piano camera (Tiffin and Seashore). C. E. Seashore. **2**: 5—1930

Scale temperament as applied to piano tuning. O. L. Railsback. **9**: 274—1938

Scientific measurements of piano playing as used in making Ampico records. C. F. Stoddard. **1**: 36—1929

Spark chronograph developed for measuring loudness of piano tones. C. N. Hickman. **1**: 35—1929

Study of the tuning of pianos. O. L. Railsback. **10**: 86—1938

6.7 Violin Family

PAPERS

Departure of the overtones of a vibrating wire from a true harmonic series. R. S. Shankland and J. W. Coltman. **10**: 161—1939

Influence of intensity on the pitch of violin and 'cello tones. Don Lewis and Milton Cowan. **8**: 20—1936

Mechanical action of violins. F. A. Saunders. **9**: 81—1937

Response measurement and harmonic analysis of violin tones. R. B. Abbott. **7**: 111—1935

Violin intonation. Paul C. Greene. **9**: 43—1937

SUBTITLES

Aluminum violins. F. A. Saunders. **9**: 93—1937

Audible frequency range of musical sounds. W. B. Snow. **3**: 161—1931

Bass viol spectrum. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 343—1931

Mechanical efficiency of violins. F. A. Saunders. **9**: 96—1937

Peak power of bass viol. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 355—1931

ABSTRACTS

Frequency response curves of violins. H. Meinel (Akustische Zeits. **2**, 22 (1937)). **9**: 51—1937

Harmonic structure of the violin tone as a function of bow speed and bow pressure. A. Small. **9**: 79—1937

Harmonic structure of violin tones. A. Small. **8**: 206—1937

Influence of intensity on the pitch of violin and 'cello tones. M. Cowan and D. Lewis. **8**: 66—1936

Mechanical action of violins of high quality. F. A. Saunders. **9**: 79—1937

Mechanical bower for violins. R. B. Abbott. **7**: 74—1935

Preliminary study of the vibrations of a violin. F. A. Saunders and H. H. Hall. **7**: 74—1935

Progress report on violin research. F. A. Saunders. **10**: 256—1939

Response measurement and harmonic analysis of violin tones. R. B. Abbott. **6**: 196—1935

Violin intonation. P. C. Greene. **8**: 207—1937

6. MUSICAL INSTRUMENTS AND MUSIC

6.8 Wood Winds
6.9 Electronic Musical Instruments

6.8 Wood Winds

PAPERS

Certain anomalies in the theory of air column behavior in orchestral wind instruments. John Redfield. **6**: 34—1934

Standing sound waves in the Boehm flute measured by the hot wire probe. Robert W. Young and Donald H. Loughridge. **7**: 178—1936

Theory of the clarinet. R. N. Ghosh. **9**: 255—1938

SUBTITLES

Audible frequency range of musical sounds. W. B. Snow. **3**: 161—1931

Bass saxophone spectrum. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 343—1931

Clarinet, flute, and piccolo spectra. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 345—1931

Peak power of bass saxophone. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 355—1931

Peak powers of clarinet, flute, and piccolo. L. J. Sivian, H. K. Dunn and S. D. White. **2**: 359—1931

ABSTRACTS

Control of pitch in wind instruments. J. B. Taylor. **3**: 317—1932

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Measurement of the constants of a single reed wind vibrator. R. L. Wegel and R. R. Riesz. **1**: 171—1930

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6.9 Electronic Musical Instruments

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ABSTRACTS

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7. *Noise*

7.1 General. Unclassified

7.1 General. Unclassified (see also 5.15 and 8.1)

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7. NOISE

7.2 Annoyance
7.3 Audiograms of Noise
7.4 City Noise
7.5 Frequency Analyses of Noise
7.6 Noise in Buildings

7.2 Annoyance

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7.3 Audiograms of Noise

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SUBTITLE

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ABSTRACT

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7.4 City Noise.

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ABSTRACTS

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7.5 Frequency Analyses of Noise

PAPER

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7.6 Noise in Buildings (see also 2.2)

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SUBTITLE

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7. NOISE

7.6 Noise in Buildings (continued)
7.7 Machinery Noise

7.6 Noise in Buildings (continued)

ABSTRACTS

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7.7 Machinery Noise

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Method for evaluating compliant materials in terms of their ability to isolate vibrations. William Jack and John S. Parkinson. **9**: 141—1937

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7. NOISE

7.7 Machinery Noise (continued)

7.7 **Machinery Noise** (**continued**)

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8.1 General, Unclassified

8.1 General, Unclassified

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9.1 General, Unclassified

9.1 General, Unclassified

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Vocal resonance. Don Lewis. **8**: 91—1936

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ABSTRACTS

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9. SPEECH AND SINGING

9.1 General, Unclassified (continued)
9.2 Anatomy of Speech Organs
9.3 Articulation Testing. Articulation *versus* Loudness, Frequency Range, Noise, Distortion, and Reverberation
9.4 Frequency of Occurrence of Speech Sounds

9.1 General, Unclassified (continued)

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9.2 Anatomy of Speech Organs

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9.3 Articulation Testing. Articulation *versus* Loudness, Frequency Range, Noise, Distortion, and Reverberation

PAPER

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ABSTRACT

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9.4 Frequency of Occurrence of Speech Sounds

PAPERS

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9. SPEECH AND SINGING

9.4 Frequency of Occurrence of Speech Sounds (continued)
9.5 Frequency Analyses of Vowels and Other Speech Sounds
9.6 Instruments Relating to Speech and Singing

9.4 Frequency of Occurrence of Speech Sounds (continued)

Phonetic distribution in formal American pronunciation. Charles H. Voelker. **5**: 242—1934

ABSTRACTS

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9.5 Frequency Analyses of Vowels and Other Speech Sounds

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ABSTRACTS

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Pitch and intensity characteristics of connected speech. J. Tiffin. **5**: 223—1934

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9.6 Instruments Relating to Speech and Singing

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Some new instruments in the Iowa laboratory for the psychology of music. C. E. Seashore. **2**: 75—1930

SUBTITLES

Apparatus for photographing sound waves from phonograph records. Joseph Tiffin. **5**: 227—1934

9. SPEECH AND SINGING

9.6 Instruments Relating to Speech and Singing (continued)
9.7 Speech Pitch
9.8 Speech Power. Singing Voice Power

9.6 Instruments Relating to Speech and Singing (continued)

Electrical circuit for measuring the average power-frequency distribution of sounds. H. Fletcher. **3**: 12(S)—1931

Electrical circuit for measuring the peak power-frequency distribution of sounds. H. Fletcher. **3**: 13(S)—1931

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New synthetic vibrato apparatus. C. E. Seashore. **2**: 76—1930

Rhythm meter. C. E. Seashore. **2**: 77—1930

Tone dynometer. C. E. Seashore. **2**: 77—1930

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9.7 Speech Pitch

PAPER

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SUBTITLE

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9.8 Speech Power. Singing Voice Power

PAPERS

Applications of pitch and intensity measurements of connected speech. Joseph Tiffin. **5**: 225—1934

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SUBTITLES

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9. SPEECH AND SINGING

9.8 Speech Power. Singing Voice Power (continued)
9.9 Vibrato

9.8 Speech Power. Singing Voice Power (continued)

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ABSTRACTS

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9.9 Vibrato

PAPERS

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10. Supersonics (Ultrasonics)

10.1 General, Unclassified
10.2 Light Affected by Supersonic Waves
10.3 Supersonic Instruments

10.1 General, Unclassified

PAPERS

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10.2 Light Affected by Supersonic Waves

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10. SUPERSONICS (ULTRASONICS)

10.3 Supersonic Instruments (continued)
10.4 Gases, Supersonic Velocities, Dispersion, and Absorption

10.3 Supersonic Instruments (continued)

Tuning by simultaneous variation of L and C. Atherton Noyes, Jr. and G. W. Pierce. **9**: 210—1938

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Crevasse phenomenon in piezoelectric quartz and its application in physical measurements. J. C. Hubbard. **10**: 87—1938

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10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)

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Absorption of sound in carbon dioxide and other gases. Vern O. Knudsen and Edwin F. Fricke. **10**: 89—1938

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10. SUPERSONICS (ULTRASONICS)

10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption
10.6 Solids, Supersonic Velocities, Dispersion, and Absorption
10.7 Physical Effects of Supersonic Waves

10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption

PAPERS

Absolute sound intensity in liquids by spherical torsion pendula. Elias Klein. **9**: 312—1938

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10.6 Solids, Supersonic Velocities, Dispersion, and Absorption

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Periods of longitudinal vibration of steel cones and truncated cones. G. W. Pierce and Atherton Noyes, Jr. **9**: 301—1938

Velocity of sound in single crystals of bismuth. A. B. Focke, R. B. Lindsay and C. R. Wilks. **9**: 348—1938

10.7 Physical Effects of Supersonic Waves

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Effect of high intensity sound on cellulose fibers. S. A. Buckingham. **7**: 235—1936

Effect of high intensity sound on smokes and other aerosols. G. R. Tatum. **8**: 210—1937

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11.1 General, Unclassified
11.2 Diffraction and Interference

11.1 General, Unclassified

PAPERS

Acoustical instruments. E. C. Wente. **7**: 1—1935

Apparatus for projecting harmonic curves in space. Will C. Dod. **6**: 279—1935

Detection and location of laminations in steel plates. Harvey C. Hayes. **8**: 220—1937

Doppler effect for sound in a moving medium. Robert W. Young. **6**: 112—1934

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11.2 Diffraction and Interference

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ABSTRACTS

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11.2 Diffraction and Interference (continued)
11.3 Propagation of Sound. Absorption During Propagation. Velocity of Sound

11.2 Diffraction and Interference (continued)

Diffraction produced by cylindrical and cubical obstacles. G. G. Muller, R. Black and T. E. Davis. **9**: 273(T)—1938

On sound diffraction caused by rigid circular plate, square plate and semi-infinite screen. L. J. Sivian and H. T. O'Neil. **3**: 316—1932

11.3 Propagation of Sound. Absorption During Propagation. Velocity of Sound

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Absorption of high frequency sound in oxygen containing small amounts of water vapor or ammonia. Vern O. Knudsen and Leonard Obert. **7**: 249—1936

Absorption of sound in air, in oxygen, and in nitrogen—effects of humidity and temperature. Vern O. Knudsen. **5**: 112—1933

Absorption of sound in carbon dioxide and other gases. Vern O. Knudsen and Edwin F. Fricke. **10**: 89—1938

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Effect of humidity on reverberation time. F. L. Hopper. **3**: 422—1932

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11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance
11.5 Sounds of Finite Amplitude

11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance (see also 5.3)

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Acoustic impedance of small orifices. L. J. Sivian. **7**: 94—1935

Directional radiation of sound. Irving Wolff and Louis Malter. **2**: 201—1930

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Role of the speaker impedance in resonance in a closed pipe. William D. Phelps. **9**: 308—1938

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11.5 Sounds of Finite Amplitude

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Extraneous frequencies generated in air carrying intense sound waves. A. L. Thuras, R. T. Jenkins and H. T. O'Neil. **6**: 173—1935

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Means for radiating large amounts of low frequency sound. Edward W. Kellogg. **3**: 94—1931

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Subharmonics in forced oscillations in dissipative systems. Part I. P. O. Pedersen. **6**: 227—1935

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Effect of high intensity sound on smokes and other aerosols. G. R. Tatum. **8**: 210—1937

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Means for radiating large amounts of low frequency sound. E. W. Kellogg. **3**: 10—1931

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Some high scale acoustic phenomena. R. B. Bourne. **2**: 5—1930

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11.6 Sound Transmission Through Tubes
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11.6 Sound Transmission Through Tubes

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Acoustic filtration in non-homogeneous media. R. B. Lindsay, C. R. Lewis and R. D. Albright. **5**: 202—1934

Approximate networks of acoustic filters. Warren P. Mason. **1**: 263—1930

Position of the vibrator in the experiments of Melde and Kundt. B. J. Miller and L. O. Olsen. **9**: 341—1938

Resonance in certain non-uniform tubes. Arthur Taber Jones. **10**: 167—1939

Role of the speaker impedance in resonance in a closed pipe. William D. Phelps. **9**: 308—1938

Sound absorption and attenuation by the flue method. Hawley O. Taylor and Chalmers W. Sherwin. **9**: 331—1938

Sound propagation in ducts lined with absorbing materials. L. J. Sivian. **9**: 135—1937

Sound propagation in tubes. W. Burk and H. Lichte (Akustische Zeits. **3**, 259 (1938)). **10**: 333—1939

Sound waves in a moving medium. John D. Trimmer. **9**: 162—1937

Velocity of high frequency sound in small tubes. Gardner A. Norton. **7**: 16—1935

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Acoustical impedance of closed tube. R. D. Fay and W. M. Hall. **5**: 49—1933

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ABSTRACTS

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Sound propagation in ducts lined with absorbing materials. L. J. Sivian. **9**: 77—1937

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11.7 Theory of Waves and Vibrating Systems (see also 5.4)

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Acoustic filtration in non-homogeneous media. R. B. Lindsay, C. R. Lewis and R. D. Albright. **5**: 202—1934

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Detection and location of laminations in steel plates. Harvey C. Hayes. **8**: 220—1937

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Finite solid acoustic filters. R. B. Lindsay and A. B. Focke. **10**: 41—1938

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Improved method for obtaining photographs of ripple wave actions. M. E. Raquet and F. R. Watson. **9**: 352—1938

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Mechanical and electrical analogies of the acoustical path. Harold L. Saxton. **10**: 318—1939

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New analogy between mechanical and electrical systems. F. A. Firestone. **4**: 249—1933

On the principle of uncertainty in sound. Winston E. Kock. **7**: 56—1935

Operational treatment of nonlinear dynamical systems. Louis A. Pipes. **10**: 29—1938

Periods of longitudinal vibration of steel cones and truncated cones. G. W. Pierce and Atherton Noyes, Jr. **9**: 301—1938

Resonance in soft-walled cylinders. Jack C. Cotton. **5**: 208—1934

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Theory of acoustic filtration in solid rods. R. B. Lindsay and F. E. White. **4**: 155—1932

Tones produced by a wire placed in an ignited gas jet. J. J. Coop. **9**: 321—1938

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Vibrating string considered as an electrical transmission line. Winston E. Kock. **8**: 227—1937

Vibrations of symmetrical plates and membranes. R. C. Colwell, A. W. Friend and J. K. Stewart. **10**: 68—1938

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11.7 Theory of Waves and Vibrating Systems (continued)

Mobility method of computing the vibration of linear mechanical and acoustical systems. F. A. Firestone. **10**: 83—1938

Motion of a bar vibrating in flexure including the effects of rotary and lateral inertia. W. P. Mason. **7**: 75—1935

New analogy between mechanical and electrical systems. F. A. Firestone. **4**: 5—1932

On forced vibrations of a circular plate with free edge by point excitation. H. Backhaus and R. Schuenemann. **7**: 77—1935

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Analytic Subject Index

to

Contemporary Literature on Acoustics

As Listed in the Journal of the Acoustical Society of America

April, 1937–April, 1939

MOST of the titles of papers appearing in other languages than English have been translated; the clue as to the language in which the article is written can usually be found by noting the name of the journal in which it appears. Abstracts in English of many foreign papers have appeared in Science Abstracts, Section A. Where references are made to Science Abstracts, the reference is to the volume number and abstract number. The abbreviations of the names of journals are those used in Science Abstracts and can be found in any annual index to those abstracts.

2. Architectural Acoustics

2.1 General, Unclassified
2.2 Auditorium Design

2.1 General, Unclassified

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2.2 Auditorium Design (continued)
2.3 Studies of Existing Auditoria
2.4 Sound Absorption, Theory and Methods of Measurement
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2.8 Reverberation Measuring Instruments
2.9 Sound Transmission, Theory and Methods of Measurement

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2.10 Measurements of Sound Transmission
2.11 Vibration Insulating Supports

2.10 Measurements of Sound Transmission

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4. Ear and Hearing

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4.2 Anatomy and Physiology of the Ear
4.3 Binaural Hearing. Localization
4.4 Deafness
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4.6 Loudness, Threshold Determinations (continued)

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5. Applied Acoustics. Instruments and Apparatus

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5.1 General, Unclassified

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

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5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (continued)

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.9 Microphones. Vibration Microphones. Microphone Calibration Equipment
5.10 Navigational Instruments. Depth and Altitude Measuring Instruments. Geophysical Prospecting. Under-Water Sound. Submarine Detectors
5.11 Oscillators
5.12 Phase Meters
5.13 Public Address Systems and Sound Picture Installations

5.9 Microphones. Vibration Microphones. Microphone Calibration Equipment

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5.13 Public Address Systems and Sound Picture Installations (continued)
5.14 Rayleigh Disks
5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement
5.16 Sound Recording and Reproducing

5.13 Public Address Systems and Sound Picture Installations (continued)

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5. APPLIED ACOUSTICS. INSTRUMENTS AND APPARATUS

5.16 Sound Recording and Reproducing (continued)
5.17 Telephones, Telephone Receivers

5.16 Sound Recording and Reproducing (continued)

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6. Musical Instruments and Music

6.1 General, Unclassified
6.2 Bells
6.4 Drums and Traps
6.5 Organs
6.6 Pianos
6.7 Violin Family

6.1 General, Unclassified

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6. MUSICAL INSTRUMENTS AND MUSIC

6.7 Violin Family (continued)
6.8 Wood Winds
6.9 Electronic Musical Instruments

6.7 Violin Family (continued)

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7. *Noise*

7.1 General, Unclassified
7.2 Annoyance
7.4 City Noise
7.5 Frequency Analyses of Noise
7.6 Noise in Buildings
7.7 Machinery Noise

7.1 General, Unclassified (see also 5.15)

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9.2 Anatomy of Speech Organs
9.3 Articulation Testing. Articulation *versus* Loudness, Frequency Range, Noise, Distortion, and Reverberation
9.5 Frequency Analyses of Speech Sounds
9.6 Instruments Relating to Speech and Singing
9.7 Speech Pitch
9.8 Speech Power. Singing Voice Power

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10.2 Light Affected by Supersonic Waves

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10. SUPERSONICS (ULTRASONICS)

10.2 Light Affected by Supersonic Waves (continued)
10.3 Supersonic Instruments

10.2 Light Affected by Supersonic Waves (continued)

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10. SUPERSONICS (ULTRASONICS)

10.3 Supersonic Instruments (continued)
10.4 Gases, Supersonic Velocities, Dispersion, and Absorption

10.3 Supersonic Instruments (continued)

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10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)

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10. SUPERSONICS (ULTRASONICS)

10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (continued)
10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption

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10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (continued)

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10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption

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10. SUPERSONICS (ULTRASONICS)

10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption (continued)
10.6 Solids, Supersonic Velocities, Dispersion, and Absorption
10.7 Physical Effects of Supersonic Waves

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10.8 Chemical Effects of Supersonic Waves
10.9 Biological Effects of Supersonic Waves

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11. Waves and Vibrations

11.1 General, Unclassified
11.2 Diffraction and Interference
11.3 Propagation of Sound. Absorption during Propagation, Velocity of Sound

11.1 General, Unclassified

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11. WAVES AND VIBRATIONS

11.3 Propagation of Sound. Absorption during Propagation, Velocity of Sound (continued)
11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance.
11.5 Sounds of Finite Amplitude, Distortion
11.6 Sound in Tubes
11.7 Theory of Waves and Vibrating Systems

11.3 Propagation of Sound. Absorption during Propagation, Velocity of Sound (continued)

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